

**MODULAR Part FCL CPL(A)
COURSE
TRAINING MANUAL
TRAINING SCHEDULES, SYLLABUS & SKILL TEST**

THE MODULAR Part-FCL CPL (A) COURSE

ANDREWSFIELD AVIATION LTD

CONTENTS

PART ONE - TRAINING PLAN

	Page No.
Course Aim	1
Course Description	1
Experience Requirements	2
Flying Training	3
Summary of Training	3
Training Records	4
Safety Training	4
Skill Test	5,6,7,8,9
Standards	10
Student Training Record	Appendix "A"
CPL(A) Flying Training Quality Document	Appendix "B"
Course Completion Certificate	Appendix "C"

PART TWO – BRIEFINGS AND EXERCISES

Sortie 1	11
Sortie 2	12
Sortie 3	13
Sortie 4	14
Sortie 5	15
Sortie 6	16
Sortie 7	17
Sortie 8	18
Sortie 9	19
Sortie 10	20
Sortie 11 - Cross-country No. 1	21
Sortie 12 - Cross-country No. 2	22
Sortie 13 - Cross-country No. 3	23
Sortie 14 - Cross-country No. 4	24
Sortie 15	25
Sortie 16	26
Sortie 17	27,28
Course Structure	29
Instructional Methods	29
Distribution List	Annex A
Amendments	Annex B
Glossary Of Useful Terms	Annex C
List Of Abbreviations	Annex D
Bibliography	Annex E

**FLYING TRAINING FOR THE COMMERCIAL PILOT LICENCE (AEROPLANES)
MODULAR COURSE**

AIM OF COURSE

- 1 The course is designed to train pilots to the level of proficiency necessary for the issue of a CPL(A).

COURSE DESCRIPTION

The training for the CPL(A) modular course is a minimum of 25 hours and includes 10hrs instruments and 5 hrs on a complex type aircraft and is normally spread over 4-6 weeks.

PLANNED SORTIES COVERING THE FLYING TRAINING

ABREVIATED LIST OF FLYING SORTIES

Sortie	Remarks	Exercises	Aircraft	Flight times		
				PA28	PA28R	IF
1	Circuits	1 to 5	PA28	1.0		
2	General Handling	2, 6, 7	PA28	1.5		
3	General IF Handling	9, 10, 12, 13	PA28	1.0		0.8
4	General IF Handling	15 to 17	PA28	1.0		0.8
5	Radio Navigation	14	PA28	1.5		1.3
6	Instrument Pattern	11	PA28	1.5		1.3
7	General IF Handling	9, 10, 12, 13	PA28	1.0		0.8
8	General IF Handling	15 to 17	PA28	1.0		0.8
9	Radio Navigation	14	PA28	1.5		1.3
10	Instrument Pattern	11	PA28	1.5		1.3
11	Cross-country	8	PA28	1.5		
12	Cross-country	8	PA28	2.0		
13	Cross-country	8	PA28	2.0		0.8
14	Cross-country	8	PA28	2.0		
15	Circuits	2 to 5	PA28R		1.5	
16	General Handling	2, 6, 7	PA28R		1.5	
17	Skill Test Rehearsal	1 to 18	PA28R		2.0	0.8
Total (Hours)				20.0	5.0	(10.0)

Notes:

- 1 The above table shows the expected training sorties for the CPL course. It fulfils the mandatory training.
- 2 Sorties 3 to 10 are not required if the student holds a valid instrument rating.
- 3 The sorties should all be completed but minor changes may be allowed to suit individual student abilities e.g. sortie 14 may be substituted with an alternative.
- 4 The sorties should be in the order shown in the table, but minor changes may be allowed for operational reasons e.g. briefing for several sorties may be completed during a bad weather day.
- 5 The sortie times given in the table are not mandatory, but the flight time totals are minimum and must not be reduced.
6. The amount of instrument flight training carried out in an exercise will be recorded separately in the training record

EXPERIENCE REQUIREMENTS BEFORE COMMENCING THE PART -FCL CPL(A) MODULAR COURSE

Before commencing the Part-FCL CPL(A) modular course, at Andrewsfield, an applicant shall:

- (a) Minimum of 18 years of age
- (b) be the holder of a PPL(A) with a night qualification issued in accordance with ICAO Annex 1;
- (c) have completed at least 150 hours flight time as pilot and;
- (d) hold an appropriate class or type rating.
- (d) hold a course completion certificate from an approved theoretical knowledge training organization
- (e) hold a FRTOL and or English Language proficiency Minimum Level 4
- (f) hold or ensure that they are capable of obtaining a class 1 medical certificate.
- (g) Educational Requirement: an applicant must be able to understand English as the course will be carried out using the English language
- (h) Hold a night Qualification/Rating

The applicant for a CPL(A) via the modular route shall have completed in aeroplanes at least:

- (a) 200 hours of flight time
- (b) 100 hours PIC
- (c) 20 hours cross-country flight time as PIC, including a cross-country flight totaling at least 300nm (540Km) in the course of which full stop landings at two aerodromes different from the aerodrome of departure shall be made;
- (d) 10 hours of instrument instruction time, of which not more than 5 hours can be instrument ground time.
- (e) 5 hours of night flight time comprising at least 3 hours dual instruction, including at least 1 hour cross-country navigation and 5 solo take-offs and 5 full-stop landings.

The applicant wishing to undertake the modular CPL(A) course shall, under the supervision of the Head of Training, complete all the instructional stages in one continuous approved course of training.

The course of theoretical knowledge given by an EASA approved Ground Training Organisation shall be completed within 18 months. The flight instruction and Skill Test shall be completed within 36 months from the date of first gaining a pass or partial pass in the theoretical examinations. The theoretical knowledge examinations must have been successfully completed before the Skill Test can be attempted.

CREDITS FOR PREVIOUS EXPERIENCE.

Credits for previous experience will be dealt with on an individual basis with reference to CAP804 and Part – FCL Holders of a valid IR Sorties 3 to 10 are not required reducing the course by 10 hours

FLYING TRAINING

Applicants without an instrument rating shall be given at least 25 hours dual flight instruction, including 10 hours instrument instruction. 5 hours of the flight instruction shall be carried out in a complex aeroplane certificated for the carriage of at least four persons and have a variable pitch propeller and retractable landing gear.

Applicants with a valid instrument rating shall be given at least 15 hours dual visual flight instruction.

SUMMARY OF COMMERCIAL PILOT LICENCE (AEROPLANES) FLIGHT TRAINING

See reference PART- FCL1, AMC FCL 1.160 and 1.165(a) (4)

FLYING COURSE TRAINING HOURS

Flight training is normally available Monday to Friday 0800 – 1700 Z (Summer) and 0830 – 1600 Z (Winter).

Flight training exercises are proceeded by a briefing from the instructor and a de-brief given at the conclusion of each exercise. A day is broken up into training slots of 2.5 hours exercises may occupy one or more slots, for example, a cross country flight of 1.5 hours plus briefing and de- briefing will occupy two slots.

No student will fly more than three exercises in any one day. This normally amounts to a maximum of four hours of actual flying. There is a rest period of at least one hour between exercises.

No student will fly for more than 5 days in any week i.e. there must be 2 rest days per week.

BAD WEATHER CONSTRAINTS

Flying training will not take place if the cloud base is below 1000ft QFE and/or the visibility is below 1800m. Demonstrated cross wind limits for the aeroplane will also apply. Flight into known icing conditions is prohibited (also see OPS manual for weather minima)

During periods of bad weather when flight exercises cannot take place, students will have the use of a quiet study area with appropriate study material available.

Directed private study, when necessary will be given by the course instructor or the Head of Training

TRAINING RECORDS

Details of flying training will be recorded on individual assessment sheets and summarised on a separate sheet. These records will also constitute attendance records.

The Training Folder will contain:

- Checklist (for the following):
- CPL(A) Flying Training Quality Document,
- Training Records,
- Copy of Medical Certificate.
- Proof of Identity
- Proof of Credits(If applicable)

The training records shall be signed by the instructor and the student and shall contain as a minimum the following:

- Sortie number
- Student name
- Exercise completed
- Date
- Duration of flight
- Route flown (if applicable)
- Emergency exercise practiced
- Comments relating to student performance
- Recommendation for next exercise
- Students Grade

The student is expected to complete his/her logbook as soon as practicable after flight indicating the exercise carried out. Upon completion of the course the Head of Training / Chief Flying Instructor will examine and certify the correctness of log book entries. All approved course flying is to be clearly identified as such and include details of the exercises carried out. Log books must be kept in accordance with the UK Air Navigation Order currently in force and must conform to PART -FCL.

All training records will be maintained in individual files and will be retained in a secure place only available to the Head of Training/Chief Flying Instructor and course instructors. Individual records will be made available to representatives of the CAA and to the student on request.

SAFETY TRAINING

Before training commences all students will be briefed on safety by the HT/CFI or course instructor and must comply with all the requirements specified in the Andrewsfield Aviation Operations Manual. The highest standard of safety is expected at all times from instructors and students.

In addition to those emergency drills carried out during flight exercises, the following Emergency Procedures will be covered.

These will consist of action to be taken in the event of the following:

- Ditching Procedures
- Propeller Malfunction
- Use of Safety Equipment
- Evacuation Procedures
- Illness in Flight

Emergency drills will be conducted during each flight (at least one drill) through out the course and will be recorded in the student training record.

SKILL TESTS

On completion of the course and the achievement of a satisfactory standard during a skill test rehearsal. The skill test may be undertaken. If a satisfactory standard is not achieved, then further training and or flights must be undertaken until the required competency is achieved.

The skill test for the commercial pilots licence is conducted by an examiner authorised by the Civil Aviation Authority, and before test the student must be issued with a recommendation for test issued by an individual authorised by the CAA. Andrewsfield Aviation will make the necessary arrangements for the completion of this form and the arrangements for the skill test after consultation with the student.

Notes for the guidance of applicants taking the skill test for the CPL will be given to every student on the course.

THE Part-FCL CPL(A) SKILL TEST

On completion of the flying training the applicant shall take the CPL(A) Skill Test on a single-engine aeroplane in accordance with Appendix 1 and 2 to Part-FCL as follows:

1. An applicant for a skill test for the CPL(A) shall have satisfactorily completed all of the required training, including instruction on the same type/class of aeroplane to be used in the test. The aeroplane used for the skill test shall meet the requirements for training aeroplanes and be certificated for the carriage of at least four persons, have a variable pitch propeller and retractable landing gear.

2. The administrative arrangements for confirming the applicant's suitability to take the test, including disclosure of the applicant's training record to the examiner, will be determined by the Authority.
3. The applicant shall pass sections 1 through 5 of the skill test and section 6 if a multi-engine aeroplane is used. Failure in more than one section will require the applicant to take the entire test again. An applicant failing only one section shall take the failed section again. Failure in any section of the re-test, including those sections that have been passed on a previous attempt, will require the applicant to take the entire test again. All sections of the skill test shall be completed within 6 months.
4. Further training may be required following any failed skill test. Failure to achieve a pass in all sections of the test in two attempts shall require further training as determined by the Authority. There is no limit to the number of skill tests that may be attempted.

Conduct of the test

5. The Authority will provide the FE (Flight Examiner) with adequate safety advice to ensure the test is conducted safely.
6. Should the applicant choose to terminate a skill test for reasons considered inadequate by the FE, the applicant shall re-take the entire skill test. If the test is terminated for reasons considered adequate by the FE, only those sections not completed shall be tested in a further flight.
7. At the discretion of the FE, any maneuver or procedure of the test may be repeated once by the applicant. The FE may stop the test at any stage if it is considered that the applicant's demonstration of flying skill requires a complete re-test.
8. The applicant shall be required to fly the aeroplane from a position where the pilot-in-command functions can be performed and to carry out the test as if there is no other crew member. Responsibility for the flight shall be allocated in accordance with national regulations.
9. The route to be flown shall be chosen by the FE and the destination shall be a controlled aerodrome. The applicant shall be responsible for the flight planning and shall ensure that all equipment and documentation for the execution of the flight are on board. The duration of the skill test shall be at least 90 minutes.
10. An applicant shall indicate to the FE the checks and duties carried out, including the identification of radio facilities. Checks shall be completed in accordance with the authorised check list for the aeroplane on which the test is taken. Power settings and speeds shall be agreed with the FE before the start of the test and should normally conform to those given in the operations or flight manual of the aeroplane concerned.
11. The FE shall take no part in the operation of the aeroplane except where intervention is necessary in the interests of safety or to avoid unacceptable delay to other air traffic.

Flight test tolerances

12. The applicant shall demonstrate the ability to:

- operate the aeroplane within its limitations;
- complete all maneuvers with smoothness and accuracy;
- exercise good judgment and airmanship;
- apply aeronautical knowledge and;
- maintain control of the aeroplane at all times in such a manner that the successful outcome of a procedure of maneuver is never seriously in doubt.

13. The following limits are for general guidance. The FE shall make allowances for turbulent conditions and the handling qualities and performance of the aeroplane used.

Height:	normal flight	±	100 feet
	with simulated engine failure (multi)	±	150 feet
Tracking on radio aids		±	5 degrees
Heading:	normal flight	±	10 degrees
	with simulated engine failure (multi)	±	15 degrees
Speed:	take-off and approach	+	5 knots
	-0 knots all other flight regimes	±	10 knots

Contents of the Skill Test

The contents of the skill test are as follows

SECTION 1 - DEPARTURE

- a. Pre-flight, documentation, mass and balance determination, weather brief.
- b. Aeroplane inspection and servicing.
- c. Taxiing and take-off.
- d. Performance considerations, trim.
- e. Aerodrome and traffic pattern operation.
- f. Departure procedure, altimeter setting, collision avoidance (lookout).
- g. ATC liaison - compliance, R/T procedures.

SECTION 2 - AIRWORK

- a. Control of aeroplane by external visual reference.
- b. Flight at critically low airspeed including recognition and recovery from incipient and full stalls.
- c. Turns, including turns in landing configuration.
- d. Flight at critically high airspeeds, including recognition of and recovery from spiral dives.
- e. Flight by sole reference to instruments, including;
 - i. level flight, cruise configuration, control of heading, altitude and airspeed,
 - ii. climbing and descending turns 10-30 degrees bank,
 - iii. recoveries from unusual attitudes, limited panel instruments.

SECTION 3 - EN ROUTE PROCEDURES

- a. Control of aeroplane by external visual reference.
- b. Orientation, map reading.
- c. Altitude, speed, heading control, lookout.
- d. Altimeter setting.
- e. Monitoring of flight progress, flight log, fuel usage, assessment of track error and re-establishment of correct tracking.
- f. Observation of weather conditions, assessment of trends, diversion planning.
- g. Tracking, positioning (NDB, VOR), identification of facilities. Implementation of diversion plan to alternate aerodrome.

SECTION 4 - APPROACH AND LANDING

- a. Arrival procedures, altimeter setting, checks.
- b. ATC liaison; compliance, R/T procedures.
- c. Go-around action from low height.
- d. Normal landing, crosswind landing (if suitable conditions).
- e. Short field landing.
- f. Post flight actions.

SECTION 5 - ABNORMAL AND EMERGENCY PROCEDURES

An applicant is expected to indicate the measures to be taken and to carry out touch drills, but is not required to perform any operating action. This section may be combined with sections 1 through 4.

- a. Simulated engine failure after take off (at a safe altitude).
- b. Alternative landing gear extension equipment malfunctions.
- c. Forced landing.
- d. Approach and landing with idle power.
- e. Landing without flaps.

STUDENT PROGRESS

If an instructor feels that a student is not making satisfactory progress the matter is to be referred to the Head of Training who will arrange for an assessment of progress to be made.

If it is felt that a student is not making satisfactory progress by achieving the stated training objectives the matter will be discussed with the student and instructor and appropriate action will be taken which may consist of further theoretical or flying training or a change of instructor. Should this be necessary the action taken will be noted in the student records and progress will be monitored by the Head of Training.

It is club policy for the student to retain the same instructor for the duration of the course, but if the student wishes to change instructors every effort will be made to comply with this wish.

In order to detect training deficiencies a periodic review of pass rates and course completion times will be made and will be monitored in accordance with the school quality system.

The performance standard to be achieved is stated at the end of each sortie listed. This standard should be achieved before commencement of the subsequent sorties.

STANDARDS

All instructors are responsible for ensuring that students are trained to the highest standards and the Head of Training has overall responsibility for the maintenance of high standards and for the appointment and standardisation of instructors.

The Head of Training is to ensure that instructors hold appropriate qualification before giving instruction on any course offered at Andrewsfield. At present instructors authorised to conduct the Commercial Pilots course are:

Carol Cooper
Robert Gardner
Paul Slater

There will a maximum of 2 instructors used per student with the third CFI (HT) to be used for progress checks and there will be a maximum of 2 students per instructor.

In order to ensure that consistent high standards are maintained the Head of Training will:

Arrange for students training records to be examined, to ensure that they are fully completed and that instruction is being given in accordance with the approved syllabus. These records will include a grading system to be completed at the end of each sortie by the instructor to rate the performance of the student.

Monitor skill test results on a monthly basis to ensure that Andrewsfield objective of obtaining a first time pass rate of 80% is being achieved. If it is deemed that progress is not being achieved the CFI/HT will carry out a progress flight.

It is expected that all students will pass the skills test at the first attempt or exceptionally in one series of two attempts and achievement of this goal will be considered as maintenance of satisfactory standards. If this standard is not achieved the cause will be investigated with the instructor concerned.

DISCIPLINE

Should a student not show an acceptable standard of decorum, safety or any other matter, which is considered detrimental to the training organisation, then that student will be warned, and if the offences are continued or repeated, then the student will be suspended from training. A detailed and signed written record of this action will then be logged in the student record file

BRIEFING AND AIR EXERCISES

A detailed statement of each air exercise and briefing are contained in the course syllabus and are arranged in an order that should provide an effective learning sequence. However there may be a need to adjust this sequence to assist an individual student.

**Andrewsfield
CPL Training**

Sub	Costa
Id	IdCosta IR
AltStm	TStm IR
Insto	TIdCosta IR
Sto1 Face	RetSpel
	ChSpel
	ChSpel
	ChSpel
	ApalSpel
	TIS
	MbrngSpel
Sto2 IdRights	
SubSpel	
Sto3 CostaNthg	
InstoSpel	

ANDREWSFIELD AVIATION LTD

CPL(A) FLYING TRAINING QUALITY DOCUMENT

Name of Student

Address.....

.....Telephone No

Certificate of Completion of Theoretical Course of Instruction obtained.....

Licence No.....Class Rating Expires.....

Logbook Hours Dual.....Hours P1.....

Valid IR (Yes/No).....Expires.....

Night qualification (Yes/No).....

Medical Certificate Class.....Expires.....

Next Of Kin Contact Details

Receipt by student of course material.....

Date commenced flight training.....

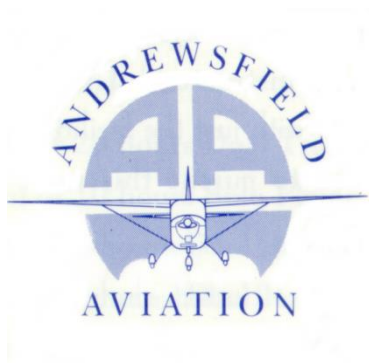
Sortie	Flight Times and Date	Instructor's Signature
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		

Flying training completed on.....Signature.....CFI

Course completed.....Student

Recommended by.....

Skill Test Pass/Partial/Fail.....Examiner



ANDREWSFIELD AVIATION LIMITED

PART-FCL CPL(A)

COURSE COMPLETION CERTIFICATE

I confirm that

**Has satisfactorily completed a course of training for the
Part-FCL CPL(A)**

The total number of hours flight training was

Signed

Dated

Carol Cooper
HT/CFI Andrewsfield

FLIGHT TRAINING SORTIES

The content of each training sortie follows.

SORTIE 1	CIRCUIT TRAINING (incorporating Ex 1 – 5)
Aim:	To learn to perform all the required pre-flight, flight and post-flight procedures in the aerodrome circuit, including use of the checklist
Allocation of Training Time:	Briefing and debriefing 1.5 hours Aircraft flight training 1.0 hour
Air Exercise	Take-off, traffic pattern, approach and landing. Collision avoidance. Checks according to checklist. Traffic patterns; simulated engine failure during and after take-off. Maximum performance (short field and obstacle clearance) take-offs; short field landings. Cross-wind take-off and landing; low-level go-arounds. Flapless landings, glide approaches, touch and goes. Emphasis should be given to control of the aircraft using external References, accurate airspeed control, conformance to circuit pattern Good lookout, stable approach, and a safe touch-down
Performance Standard	To be able to carry out necessary pre and post flight checks and fly the aircraft in the circuit accurately .

SORTIE 2	GENERAL HANDLING (incorporating ex 2,6&7)
Aim:	To learn to perform general handling, including the necessary checks and pre aerobatic checks in accordance with the checklist
Allocation of Training Time:	Briefing and de-briefing 2.00 hours Aircraft flight training 1.5 hours
Air Exercise	<p>(Ex. 2) Take-off and departure to local area. Straight and level at different speeds Climbing and descending at different speeds and rates Turning at angles of bank up to 40 degrees Gliding turns at angles of bank up to 40 degrees</p> <p>(Ex. 6) Flight at relatively critical high airspeeds; recognition of and recovery from spiral dives.</p> <p>(Ex. 7) Flight at critically slow airspeeds, spin avoidance, recognition of and recovery from, incipient and full stalls. Abnormal and emergency operations - equipment malfunctions - simulated forced landing and/or precautionary landing Entry to the traffic pattern, approach and landing</p> <p>SIMULATED MALFUNCTIONS Engine fire Fire in the fuselage Electrical smoke/fire Undercarriage Electrical system failure Icing Door open</p> <p>Note: at least one simulated emergency will be practiced on each subsequent training flight</p>
Performance Standard	To be able to carry out the necessary pre and post flight checks and to Fly the aircraft accurately in accordance with the flight manual to the Limits and to carry out the pre aerobatic checks when necessary

SORTIE 3	GENERAL IF HANDLING (incorporating ex 9,10,12 & 13)
Aim:	To learn to fly the aircraft accurately and smoothly by sole reference to instruments on full panel
Allocation of Training Time:	Briefing and de-briefing 1.5 hours Aircraft flight training 1.0 hours
Air Exercise	<p>(Ex. 9) Basic instrument flying without external visual clues. Horizontal flight; power changes for acceleration or deceleration, maintaining straight and level flight; turns in level flight with 15 degrees and 25 degrees bank, left and right; roll-out onto predetermined headings.</p> <p>(Ex. 10) Repetition of Ex. 9; additionally climbing and descending, maintaining heading and speed, transition to horizontal flight; climbing and descending turns</p> <p>(Ex. 12) Repetition of Ex. 9 and steep turns with 45 degrees bank, recovery from unusual attitudes.</p> <p>(Ex. 13) Repetition of Ex. 12.</p>
Performance Standard	To be able to carry out necessary pre and post flight checks and to fly the aircraft accurately at various speeds and in various configurations In accordance with the flight manual by sole reference to instruments to The limits

SORTIE 4	GENERAL IF HANDLING (incorporating ex 15-17)
Aim:	To learn to fly the aircraft accurately and smoothly and recover from unusual attitudes by sole reference to instruments using full or partial panel.
Allocation of Training Time:	Briefing and de-briefing 2.0 hours Aircraft flight training 1.0 hour
Air Exercise	(Ex. 15) Repetition of Ex. 9 i.e. basic instrument flying without external visual clues. Horizontal flight; power changes for acceleration or deceleration, maintaining straight and level flight; turns in level flight with 15 degrees and 25 degrees bank, left and right; roll- out onto predetermined headings. Recovery from unusual attitudes. (Ex. 16) Repetition of Ex. 9; turns and level changes with simulated failure of the artificial horizon and/or directional gyro
Performance Standard	To be able to carry out the necessary pre and post flight checks and to fly the aircraft accurately at various speeds and in various configurations in accordance with the flight manual by sole reference to instruments to the limits

SORTIE 5	RADIO NAVIGATION (EX 14)
Aim:	To learn to use VOR and DME and ADF aids accurately and to establish and maintain track and fix position..
Allocation of Training Time:	Briefing and de-briefing 2.0 hours Aircraft flight training 1.5 hours
Air Exercise	(Ex. 14) Radio navigation using VOR, selection and identification of required beacon. Interception and maintenance of required QDM/QDR obtaining position fixes using VOR ,DME and ADF
Performance Standard	To be able to carry out the necessary pre and post flight checks and to fly the aircraft accurately whilst tracking to and from a VOR and fixing position within the limits

SORTIE 6	INSTRUMENT PATTERN (EX 11)
Aim:	To learn to fly horizontal and vertical patterns, to be able to control the speed and rate of descent
Allocation of Training Time:	Briefing and de-briefing 2.0 hours Aircraft flight training 1.5 hours
Air Exercise	<ul style="list-style-type: none"> a) Ex. 11) Instrument Pattern. b) Start exercise, decelerate to approach speed, flaps into approach configuration. c) Initial standard turn (left or right) d) Roll out on opposite heading, maintain new heading for 1 minute. e) Standard turn, (gear down), descend 500ft/min. f) Roll out on initial heading, maintain descent (500ft/min) and new heading for 1 minute. g) Transition to level flight, 1,000 ft below initial flight level. h) Initiate go-around and i) climb at best rate-of-climb airspeed.
Performance Standard	<p>To be able to carry out, horizontal and vertical instrument patterns to the following limits.</p> <ul style="list-style-type: none"> Height +/- 100ft Heading +/- 10 degrees Speed +/- 5 knots (approach -0 knots)

SORTIE 7	GENERAL IF HANDLING (incorporating ex 9,10,12 &13)
Aim:	To learn to fly the aircraft accurately and smoothly and recover from unusual attitudes by sole reference to instruments on full panel.
Allocation of Training Time:	Briefing and de-briefing 1.5 hours Aircraft flight training 1.0 hour
Air Exercise	<p>(Ex. 9) Basic instrument flying without external visual clues. Horizontal flight; power changes for acceleration or deceleration, maintaining straight and level flight; turns in level flight with 15 degrees and 25 degrees bank, left and right; roll-out onto predetermined headings.</p> <p>(Ex. 10) Repetition of Ex. 9; additionally climbing and descending, maintaining heading and speed, transition to horizontal flight climbing and descending turns.</p> <p>(Ex. 12) Repetition of Ex. 9 and steep turns with 45 degrees bank, recovery from unusual attitudes.</p> <p>(Ex. 13) Repetition of Ex. 12.</p>
Performance Standard	To be able to fly accurately to the limits specified on page 7 whilst flying by sole reference to instruments, including recovery from unusual attitudes with minimum height loss.

SORTIE 8	GENERAL IF HANDLING (incorporating ex 15-17)
Aim:	To learn to fly the aircraft accurately by sole reference to instruments, using either full or partial panel
Allocation of Training Time:	Briefing and de-briefing 1.5 hours Aircraft flight time 1.0 hour
Air Exercise	<p>(Ex. 15) Repetition of Ex. 9 i.e. basic instrument flying without external visual clues. Horizontal flight; power changes for acceleration or deceleration, maintaining straight and level flight; turns in level flight with 15 degrees and 25 degrees bank, left and right; roll-out onto predetermined headings. Recovery from unusual attitudes.</p> <p>(Ex. 16) Repetition of Ex. 9; turns and level changes with simulated failure of the artificial horizon and/or directional gyro.</p> <p>(Ex. 17) Recognition of and recovery from, incipient and full stalls.</p>
Performance Standard	To be able to fly accurately by sole reference to instruments to the limits specified including recovery from unusual attitudes including a stall with minimum height loss

SORTIE 9	RADIO NAVIGATION (incorporating ex 14)	
Aim:	To learn to use NDB accurately, to establish and maintain track, and find the approximate wind speed and direction	
Allocation of Training Time:	Briefing and De-briefing	2 hours
	Aircraft flight training	1.5 hours
Air Exercise	(Ex. 14) Radio navigation using, NDB or, if available VDF; Selection and identification of a beacon, establishing a QDM/QDR Obtain position fixes using ADF and VDF	
Performance Standard	To be able to carry out the necessary pre and post flight checks and to fly the aircraft accurately tracking to and from an NDB within the limits specified	

SORTIE 10	INSTRUMENT PATTERN (incorporating ex 11)
Aim:	To learn to perform to achieve the horizontal and vertical patterns, to be able to control the speed and rate of descent
Allocation of Training Time:	Briefing and de-briefing 2.5 hours Aircraft flight training 1.5 hours
Air Exercise	<p>(Ex. 11) Instrument Pattern.</p> <ol style="list-style-type: none"> a. Start exercise, decelerate to approach speed, flaps into approach configuration. b. Initial standard turn (left or right) c. Roll out on opposite heading, maintain new heading for 1 minute. d. Standard turn, (gear down), descend 500ft/min. e. Roll out on initial heading, maintain descent (500ft/min) and new heading for 1 minute. f. Transition to level flight, 1,000 ft below initial flight level. g. Initiate go-around and Climb at best rate-of-climb airspeed
Performance Standard	<p>To be able to carry out a non precision approach to MDA and carry out circling approach procedure to land to the following limits.</p> <p>Height +/- 100ft MDA + 100ft-0ft Heading +/-10 degrees Speed +/- 5 knots (approach -0 knots)</p>

SORTIE 11	CROSS COUNTRY (incorporating ex 8)
Aim:	To learn to navigate cross country under VFR
Route:	Andrewsfield - Heathfield - Clipgate - Andrewsfield
Allocation of Training Time:	Briefing and de- briefing 2 hours Aircraft flight training 1.5 hours
Briefing	Planning: Items to be included: Chart(s) preparation (ensuring latest available). Determination of cruising and safety altitudes. Calculation of headings and ground speeds and completion of flight log. Selection of radio frequencies. Regulated airspace and altimeter settings. Aeroplane and aerodrome performance. Fuel requirements. Cockpit management, particularly approved check list.
Air Exercise	Depart the zone as per ATC clearance. Set heading and time at relevant VRP for Heathfield and climb to cruise altitude. Cruise checks - including altimeter setting procedures. At timing point, track estimation error, heading correction and ETA revision. Log keeping. Radio procedures. Identification and confirmation of Heathfield. Turn overhead Heathfield and set heading and time to Clipgate. 2 nd leg as above but incorporating position fix using VOR, ADF and VDF (15 mins). 3 rd leg as per first leg, setting heading overhead Clipgate for Andrewsfield.
Performance Standard	To be able to carry out the necessary pre and post flight checks and to fly the aircraft accurately as a VFR navigation exercise maintaining track and estimates without feature crawling to the limits detailed

SORTIE 12	CROSS COUNTRY 2 (incorporating ex 8)
Aim:	To learn to consolidate the techniques required for VFR cross country navigation and to carry out a MATZ penetration and to obtain a Traffic/Procedure service from ATC
Route:	Andrewsfield - Fenland - Crowfield - Andrewsfield
Allocation of Training Time:	Briefing and de- briefing 2 hours Aircraft flight training 2 hours
Air Exercise	<p>Navigation techniques as per Cross-country no. 1. MATZ crossing procedure during first leg. Position fixing using VOR, ADF and VDF (15 mins) during second leg.</p> <p>Planning practice diversions during third leg to include:</p> <ul style="list-style-type: none"> ■ maintenance of original heading during calculation, ■ setting heading from a positive fix, ■ checking for airspace restrictions, ■ terrain clearance and safety altitude, ■ heading and ETA revisions. <p>In-flight emergency leading to Practice Forced Landing and/or Precautionary Landing</p>
Performance Standard	To be able to carry out the necessary pre and post flight checks and to fly the aircraft accurately as a VFR navigation exercise maintaining altitude, track and estimates without feature crawling to the limits defined To carry out on route liaison with ATC and to negotiate the penetration of a MATZ

SORTIE 13	CROSS COUNTRY 3 (incorporating ex 8)
Aim:	To learn to consolidate the techniques required for VFR cross country navigation and to carry out a simulated diversion, and simulating entry into cloud. To use radio navigation aids to establish a position fix and to continue to the diversion point
Route:	Andrewsfield - Halesworth - Soham - Andrewsfield
Allocation of Training Time:	Briefing and de-briefing time 2 hours Aircraft Flight Training 2 hours
Air Exercise	<p>Navigation techniques as per cross-country no. 1. after turning at Halesworth simulated instrument flight shall be commenced.</p> <p>Aircraft checks; pitot heater on, outside air temperature check, climb to safe altitude (flight level), icing checks and obtain Traffic service if possible.</p> <p>Maintain heading, height and airspeeds.</p> <p>Position fix using VOR, ADF and/or VDF after 15 minutes.</p> <p>Removal of screens and visually check position.</p> <p>Continue to Soham using visual navigation techniques.</p> <p>Diversion on leg 3 using diversion techniques as per cross-country exercise no. 2.</p> <p>In-flight emergency leading to Practice Forced Landing and/or Precautionary Landing</p>
Performance Standard	<p>To be able to carry out the necessary pre and post flight checks and to fly the aircraft accurately as a VFR navigation exercise maintaining altitude, track and estimates without feature crawling to the limits detailed</p> <p>To carry out en route liaison with ATC and to penetrate a MATZ.</p> <p>To carry out an unplanned diversion including simulated cloud entry.</p>

SORTIE 14	CROSS COUNTRY 4 (incorporating ex 8)													
Aim:	To learn to consolidate the navigation techniques learned in all the previous exercises.													
Route:	Andrewsfield - Polebrook - Great Ashfield - Andrewsfield													
Allocation of Training Time:	Briefing and de-briefing 2 hours Aircraft flight training 2 hours													
Air Exercise	Route using techniques as per cross-country 1, 2 & 3. In-flight emergency leading to Practice Forced Landing and/or Precautionary Landing													
Performance Standard	<p>The student should now be able to fly the aeroplane and navigate accurately to within the following tolerances:-</p> <table border="0"> <tr> <td>Heading</td> <td>+/- 5 degrees</td> <td>)</td> <td rowspan="4">These apply to both VFR and IFR legs.</td> </tr> <tr> <td>Height</td> <td>+/- 100 feet</td> <td>)</td> </tr> <tr> <td>Speed</td> <td>+/- 5 knots</td> <td>)</td> </tr> <tr> <td>ETAs</td> <td>+/- 2 minutes</td> <td>)</td> </tr> </table>	Heading	+/- 5 degrees)	These apply to both VFR and IFR legs.	Height	+/- 100 feet)	Speed	+/- 5 knots)	ETAs	+/- 2 minutes)
Heading	+/- 5 degrees)	These apply to both VFR and IFR legs.											
Height	+/- 100 feet)												
Speed	+/- 5 knots)												
ETAs	+/- 2 minutes)												

SORTIE 15	PIPER ARROW CONVERSION CIRCUIT TRAINING
Aim:	To learn to carry out pre-flight and post flight operations in the aerodrome circuit on a complex type aircraft.
Route:	Andrewsfield - Polebrook - Great Ashfield - Andrewsfield
Allocation of Training Time:	Briefing and de-briefing 2 hours Aircraft Flight Training 1.5 hours
Air Exercise	(Ex.2) Take-off, traffic pattern, approach and landing. Collision avoidance. Checks according to checklist. (Ex. 3) Traffic patterns; simulated engine failure during and after take-off. (Ex. 4) Maximum performance (short field and obstacle clearance) take-offs; short field landings. (Ex. 5) Cross-wind take-off and landing; low level go-arounds.
Performance Standard	To be able to carry out the necessary pre and post flight checks and to fly Aircraft accurately in accordance with the flight manual to the limits Detailed

SORTIE 16	GENERAL HANDLING (Ex 2,6 & 7 Complex Type)
Aim:	To learn to carry out general handling maneuvers including the necessary checks to include pre aerobatic checks where necessary in accordance with the check list for the piper arrow.
Allocation of Training Time:	Briefing and de-briefing 2 hours Aircraft Flight Training 1.5 hours
Air Exercise	(Ex. 2) Take-off and departure to local area. (Ex. 6) Flight at relatively critical high airspeeds; recognition of and recovery from spiral dives. (Ex. 7) Flight at critically slow airspeeds, spin avoidance, recognition of and recovery from, incipient and full stalls. Abnormal and emergency operations <ul style="list-style-type: none"> - equipment malfunctions - simulated forced landing and/or precautionary landing
Performance Standard	To be able to carry out the necessary pre and post flight checks and to fly the aircraft accurately in accordance with the flight manual to the limits detailed To carry out all pre aerobatic checks where necessary and to deal safely with any simulated emergency in accordance with the check list

SORTIE 17	SKILL TEST REHEARSAL (Ex 1 to18)
<p>Aim:</p>	<p>To ensure that the test standard has been reached by combining all the exercises required to pass the skill test for the CPL (a). This will be flown in the Piper Arrow and will be repeated using the different routings if the student does not achieve the required standard</p>
<p>Allocation of Training Time:</p>	<p>Briefing and de-briefing 2 hours Aircraft Flight training 2 hours</p>
<p>Air Exercise</p>	<p>a) Pre-departure procedure</p> <ul style="list-style-type: none"> ■ assessment of local wind conditions and their effect on flight in the circuit ■ aircraft inspection and servicing ■ passenger briefing ■ pre-start, after-start and taxi checks <p>b) The take-off and departure</p> <ul style="list-style-type: none"> ■ compliance with ATC instructions ■ cross-wind take-off technique (if appropriate) ■ take-off safety, rotation and initial climb speeds ■ after take-off checks <p>c) VFR en-route procedures</p> <ul style="list-style-type: none"> ■ altimeter settings ■ log keeping ■ ETA calculation ■ accuracy of altitude, heading and airspeed ■ map reading, assessment and correction of errors, ETA revision ■ cruise checks and engine handling ■ en-route liaison with ATC and observance of regulations ■ turning point identification and achievement of ETA <p>d) IFR en-route procedures</p> <ul style="list-style-type: none"> ■ installation of instrument flight screens ■ observance of IFR ■ IF checks ■ liaison with ATC and observance of regulations in IMC ■ accuracy of instrument flying ■ determination of position using radio navigation aids ■ heading correction for second turning point and ETA revision (if appropriate) <p>e) Diversion Procedures</p> <ul style="list-style-type: none"> ■ calculation of navigation log information to diversion point ■ as VFR en-route procedures <p>f) General Airwork</p> <ul style="list-style-type: none"> ■ control of the aircraft by external visual reference ■ flight at critically low airspeed ■ turns

	<ul style="list-style-type: none"> ■ flight at critically high airspeed ■ level flight solely using instruments ■ climbing and descending turns solely using instruments ■ recovery from unusual attitudes solely using partial panel ■ turns solely using partial panel. g) Abnormal and emergency operations <ul style="list-style-type: none"> ■ equipment malfunctions ■ simulated forced landings h) The arrival and landing <ul style="list-style-type: none"> ■ radio navigation tracking ■ compliance with ATC instructions ■ descent checks ■ joining the circuit ■ landing checks ■ cross-wind landing technique (if appropriate) ■ post-flight actions
Performance Standard	To be able to carry out all of the exercises required to pass the CPL skill test to CAA flight test tolerances detailed

COURSE STRUCTURE

Flying training will be carried out in accordance with the syllabus detailed between pages 11 and 28, the exercises may be varied depending upon student ability but the total flight time will not be less than detailed in the syllabus.

Once the student reaches a satisfactory standard of general handling on the PA28 the exercises may be selected by the instructor in the order which is most beneficial to the student and fits in with aircraft availability and weather conditions. As a minimum the last five hours training will be completed on the PA28R Arrow but may take place earlier in the training if this is considered beneficial.

At least one emergency will be simulated during each training detail. Applicants with a valid instrument rating shall be given a minimum of ten hours in the PA28 and five hours in PA28R Arrow.

Applicants without a valid instrument rating must also include a minimum of ten hours instrument instruction as detailed in the syllabus.

INSTRUCTIONAL METHODS

All instructional details will have a briefing prior to the exercise when the aim will be explained and the method of achieving this will be discussed together with the standards required. It is essential that all items in the exercises detailed in this manual are completed. Student records should be clearly annotated where either an item has not been completed, or has not been completed to a satisfactory standard. Following the detail there will be a de brief, at which the students' performance will be discussed, further training needs will be agreed and the student training record will be completed and signed by both instructor and student.

MODULAR EASA -FCL CPL (A) TRAINING MANUAL
ANDREWSFIELD AVIATION LTD

DISTRIBUTION LIST

Copy No

- 1) Civil Aviation Authority
- 2) Andrewsfield Operations Office
- 3) Andrewsfield Chief Flying Instructor

DO NOT COPY

The following reference material is recommended

- VOR, ADF and RMI by Martin Cass
- UK Aeronautical Information Publication (AIP)

(www.ais.org.uk)

- The UK Aeronautical Information Manual (AIM) (Published by AFE)
- CAP 393 Air Navigation Order (www.caa.co.uk)
- CAP 413 Radiotelephony Manual (www.caa.co.uk)
- CAP 637 Visual Aids Handbook
- General Aviation Safety Sense Leaflets (www.caa.co.uk)
- Aeronautical Informational Circulars (AIC) (www.ais.org.uk)
- Aircraft Flight Manual or Pilots Operating Handbook
- Aircraft Check List
- Part FCL

ANDREWSFIELD AVIATION LTD

COURSE ENROLEMENT FORM

Commercial Pilots Licence (A)

Before commencing the Part-FCL CPL(A) modular course, at Andrewsfield, an applicant shall:
Minimum of 18 years of age be the holder of a PPL(A) with a night qualification issued in accordance with ICAO Annex 1; have completed at least 150 hours flight time as pilot and;

- (f) hold an appropriate class or type rating.
- (d) hold a course completion certificate from an approved theoretical knowledge training organization
- (e) hold a FRTOL and or English Language proficiency Minimum Level 4
- (f) hold or ensure that they are capable of obtaining a class 1 medical certificate.
- (g) Educational Requirement: an applicant must be able to understand English as the course will be carried out using the English language
- (h) Hold a night Qualification/Rating

The applicant for a CPL(A) via the modular route shall have completed in aeroplanes at least:

- (a) 200 hours of flight time (b) 100 hours PIC
- (c) 20 hours cross-country flight time as PIC, including a cross-country flight totaling at least 300nm (540Km) in the course of which full stop landings at two aerodromes different from the aerodrome of departure shall be made;
- (d) 10 hours of instrument instruction time, of which not more than 5 hours can be instrument ground time
- (g) 5 hours of night flight time comprising at least 3 hours dual instruction, including at least 1 hour cross-country navigation and 5 solo take-offs and 5 full-stop landings.

Student Name		Telephone Number	
Student Address			
Next Of Kin		Date Of Birth	
Email Address			
Pre Entry Requirements Met			
Licence Number		Class Rating Expiry	
Log Book Hours Dual		Hours P1	
Medical Class Certificate		Medical Expiry	
Where Medical Issued			
Receipt of Course material by Student		Date Commenced Training	
As Per CPL Course Training Syllabus			
Completion Of Ground Exercises		CFI	
Completion Of Flight Exercises		CFI	
Course Training Completed on		Signature CFI	
Course Completed		Signature Student	
CPL Skill Test	PASS/FAIL	Examiner	
Head Of Training Course Instructor		Signature	